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The effectiveness of co-digestion of sewage sludge and phytogenic waste

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Abstract

The authors explore the effect of the composition of mixtures of sewage sludge and phytogenic waste, their preliminary inoculation with a methanogenic community and the length of the process on biogas release in anaerobic co-digestion in thermophilic conditions. The study determines the effect of co-digestion products on the soil microbial community, as well as biometric parameters of the oat plants (Avena sativa L.). The authors demonstrate the principal possibility of co-digestion of the wastes. In terms of biogas release, the most preferable is the mixture of sewage sludge and maize silage. This mixture's co-digestion products possess fertilizing qualities. © IDOSI Publications, 2014.

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Keywords

Anaerobic co-digestion, Biogas, Non-traditional fertilizers, Organic waste